```
* * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 14:39:52 ON 23 MAR 2000

=> file .marykz

COST IN U.S. DOLLARS                    SINCE FILE     TOTAL
                                      ENTRY   SESSION
FULL ESTIMATED COST                      0.15      0.15

FILE 'MEDLINE' ENTERED AT 14:40:06 ON 23 MAR 2000
FILE 'AIDSLINE' ENTERED AT 14:40:06 ON 23 MAR 2000
FILE 'CAPLUS' ENTERED AT 14:40:06 ON 23 MAR 2000
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER
AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2000 AMERICAN CHEMICAL SOCIETY (ACS)
FILE 'EMBASE' ENTERED AT 14:40:06 ON 23 MAR 2000
COPYRIGHT (C) 2000 Elsevier Science B.V. All rights reserved.
FILE 'SCISEARCH' ENTERED AT 14:40:06 ON 23 MAR 2000
COPYRIGHT (C) 2000 Institute for Scientific Information (ISI) (R)
FILE 'JICST-EPLUS' ENTERED AT 14:40:06 ON 23 MAR 2000
COPYRIGHT (C) 2000 Japan Science and Technology Corporation (JST)
FILE 'WPIDS' ACCESS NOT AUTHORIZED
FILE 'JAPIO' ENTERED AT 14:40:06 ON 23 MAR 2000
COPYRIGHT (C) 2000 Japanese Patent Office (JPO)

=> s protein (w) "a" and igg (w) bind?

L3       1049 PROTEIN (W) "A" AND IGG (W) BIND?

=> s l3 and viral and vector

L4          6 L3 AND VIRAL AND VECTOR

=> d 1-6 bib ab


L4  ANSWER 1 OF 6  MEDLINE
AN  97399691    MEDLINE
DN  97399691
TI  Cell-specific targeting of Sindbis virus vectors displaying IgG-
    binding domains of protein A.
AU  Ohno K; Sawai K; Iijima Y; Levin B; Meruelo D
CS  Department of Pathology, New York University Medical Center, NY
10016,
    USA.
NC  CA68498 (NCI)
    CA22247 (NCI)
SO  NATURE BIOTECHNOLOGY, (1997 Aug) 15 (8) 763-7.
    Journal code: CQ3. ISSN: 1087-0156.
CY  United States
DT  Journal; Article; (JOURNAL ARTICLE)
LA  English
FS  Priority Journals
EM  199712
EW  19971203
AB  Sindbis virus can infect a broad range of insect and vertebrate cell
types
    due to the widespread distribution of the cellular receptor for the virus.
    The development of Sindbis virus vectors that target specific cell types
    could have important implications for the design of gene therapy
    strategies. To achieve this goal we have designed and constructed
Sindbis
    virus particles displaying the IgG-binding domain of
    protein A. The protein A-envelope
    chimeric Sindbis virus vector has minimal infectivities against
    baby hamster kidney and human cell lines. When used in conjunction
with
    monoclonal antibodies that react with cell-surface antigens, however,
the
    protein A-envelope chimeric virus was able to infect
    human cell lines with high efficiency. Infection rates were 90% or
higher
    for human lymphoblastoid cells. A variety of cells could be targeted by
    changing the monoclonal antibody without generating a new
recombinant
    virus.

L4  ANSWER 2 OF 6  MEDLINE
AN  96405036    MEDLINE
DN  96405036
TI  Surface display of proteins on bacteriophage lambda heads.
AU  Mikawa Y G; Maruyama I N; Brenner S
CS  Department of Cell Biology, Scripps Research Institute, La Jolla CA
92037,
    USA.
SO  JOURNAL OF MOLECULAR BIOLOGY, (1996 Sep 13) 262 (1)
21-30.
    Journal code: J6V. ISSN: 0022-2836.
CY  ENGLAND: United Kingdom
DT  Journal; Article; (JOURNAL ARTICLE)
LA  English
FS  Priority Journals; Cancer Journals
EM  199612
AB  We have developed plasmid and phage vectors for the display of
foreign
    proteins on the surface of bacteriophage lambda capsid by modifying
the D
    gene which encodes the major head protein gpD. The vectors have
multiple
    cloning sites, and permit colour selection and conditional chain
    termination for recombinants. Displayed proteins can be fused to either
    the N or C terminus of gpD by a peptide linker. The conditional chain
    termination scheme, via a host Escherichia coli suppressor activity,
    allows the fusion and assembly of homomultimeric proteins as well as
    control of the number of fusion proteins per phage particle. We have
    successfully displayed beta-lactamase, IgG-binding
    domains of the Staphylococcus aureus protein A, and
    beta-galactosidase by cloning the genes into the vector. The
    constructs express functionally active proteins fused to gpD that
assemble
    into phage particles. These results suggest that gpD may be fused to
many
    other peptides and proteins at their N or C terminus and the fusion
    products may be accessible on the surface of bacteriophage lambda
    particles.

L4  ANSWER 3 OF 6  CAPLUS  COPYRIGHT 2000 ACS
AN  1999:171318  CAPLUS
DN  131:14527
TI  Alphaviruses as tools in neurobiology and gene therapy
AU  Lundstrom, Kenneth
CS  F. Hoffmann-La Roche, Research Laboratories, Basel, CH-4070,
Switz.
SO  J. Recept. Signal Transduction Res. (1999), 19(1-4), 673-686
    CODEN: JRETET; ISSN: 1079-9893
PB  Marcel Dekker, Inc.
DT  Journal; General Review
LA  English
AB  A review with 47 refs. The broad host range and superior infectivity
of
    alphaviruses have encouraged the development of efficient expression
```

vectors for Semliki Forest virus (SFV) and Sindbis virus (SIN). The generation of high-titer recombinant alphavirus stocks has allowed high-level expression of a multitude of nuclear, cytoplasmic, membrane-assocd. and secreted proteins in a variety of different cell lines and primary cell cultures. Despite the **viral** cytopathogenic effects, functional assays on recombinant proteins are possible for a time-period of at least 24 h post-infection. The high percentage (80-95%) of primary neurons infected with SFV has allowed localization and functional studies of recombinant proteins in these primary cell cultures. Through multiple infection studies the interaction of receptor and G protein subunits has become feasible. Establishment of efficient scale-up procedures has allowed prodn. of large quantities of recombinant protein. Potential gene therapy applications of alphaviruses could be demonstrated by injection of recombinant SIN particles expressing .beta.-galactosidase into mouse brain. Tissue/cell specific infection has been achieved by introduction of an **IgG-binding** domain of **protein A** domain into one of the spike proteins of SIN. This enabled efficient targeting of infection to human lymphoblastoid cells.

L4 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2000 ACS
AN 1998:684981 CAPLUS
DN 129:271533
TI **Viral** vectors having chimeric envelope proteins containing the **IgG-binding** domain of **protein A**
IN Meruelo, Daniel; Ohno, Kouichi
PA New York University, USA
SO PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9844132	A1	19981008	WO 1998-US6237	19980330

W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH, GW, HU, ID, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9865919	A1	19981022	AU 1998-65919	19980330

PRAI US 1997-829558 19970328
WO 1998-US6237 19980330
AB The invention involves **viral** vectors that can be used to transduce a target cell, i.e., to introduce genetic material into the cell. The targets of interest are eukaryotic cells and particularly human cells. The transduction can be done in vivo or $i(in vitro). More particularly the invention concerns **viral** vectors that have chimeric envelope proteins and contain the **IgG-binding** domain of **protein A**. Vectors were constructed using the gp70 envelope protein of ecotropic murine leukemia virus or the E2 glycoprotein of Sindbis virus. These vectors when used in conjunction with antibodies targeting a particular cell are particularly useful for gene therapy.

L4 ANSWER 5 OF 6 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.
AN 1999116942 EMBASE
TI Alphaviruses as tools in neurobiology and gene therapy.
AU Lundstrom K.
CS K. Lundstrom, F. Hoffmann-La Roche, Research Laboratories, CH-4070 Basel, Switzerland
SO Journal of Receptor and Signal Transduction Research, (1999) 19/1-4 (673-686).
Refs: 47
ISSN: 1079-9893 CODEN: JRETET
CY United States
DT Journal; Conference Article
FS 004 Microbiology
008 Neurology and Neurosurgery
022 Human Genetics
LA English
SL English
AB The broad host range and superior infectivity of alphaviruses have encouraged the development of efficient expression vectors for Semliki Forest virus (SFV) and Sindbis virus (SIN). The generation of high-titer recombinant alphavirus stocks has allowed high-level expression of a multitude of nuclear, cytoplasmic, membrane-associated and secreted proteins in a variety of different cell lines and primary cell cultures. Despite the **viral** cytopathogenic effects, functional assays on recombinant proteins are possible for a time-period of at least 24 hours postinfection. The high percentage (80-95%) of primary neurons infected with SFV has allowed localization and functional studies of recombinant proteins in these primary cell cultures. Through multiple infection studies the interaction of receptor and G protein subunits has become feasible. Establishment of efficient scale- up procedures has allowed production of large quantities of recombinant protein. Potential gene therapy applications of alphaviruses could be demonstrated by injection of recombinant SIN particles expressing .beta.- galactosidase into mouse brain. Tissue/cell specific infection has been achieved by introduction of an **IgG-binding** domain of **protein A** domain into one of the spike proteins of SIN. This enabled efficient targeting of infection to human lymphoblastoid cells.

L4 ANSWER 6 OF 6 JICST-EPlus COPYRIGHT 2000 JST
AN 890503067 JICST-EPlus
TI Expression and purification of the HIV-1 env gene products in Escherichia coli.
AU ZHANG B
CS Okayama Univ., School of Medicine, Cancer Inst.
SO Okayama Igakkai Zasshi, (1989) vol. 101, no. 5-6, pp. 659-672. Journal
Code: Z0158B (Fig. 7, Ref. 49)
ISSN: 0030-1558
CY Japan
DT Journal; Article
LA Japanese
STA New
AB To purify the HIV-1 envelope protein with antigenic reactivity, the Pvu II-Bgl II fragment of the HIV-1 env gene, from the Pvu II site to the second Bgl II site, encoding the carboxyl terminal 180 amino acids of the

viral surface protein (SU, gp120) was molecularly cloned in Escherichia coli strain HB101 using **protein A** expression-shuttle **vector** pRIT5. The pRIT5 contains the **protein A** gene, encoding the secretion signal and **IgG binding** domain of **protein A** with the upstream promoter and the downstream multicloning sites, as well as the two replication sites for Escherichia coli and Staphylococcus aureus.

A fused protein with the molecular weight of about 55 kilodaltons was produced, which showed the same reactivity as the native **protein A** against rabbit serum IgG on Western blotting analysis. Most of the fused protein in the periplasmic space was degraded, while the complete fused protein inside the cells was recovered as an insoluble protein. The fused protein was solubilized with sodium dodecyl-sulfate(SDS), partially purified by IgG sepharose affinity chromatography, and completely purified by SDS-polyacrylamide gel electrophoresis. The quantity of the expressed fused protein was estimated about 1% of the total proteins. The purified fused protein contained 516 amino acids with Mr54,976, consisting of 305 amino acids of the **IgG binding** domain of **protein A**, 5 amino acids derived from polylinker, a carboxyl terminal 180 amino acids of the HIV-1 envelope surface protein gp120, and 26 amino acids derived from the pUC19 sequence.(author abst.)

=> s igg (w) bind? and vector and transduce and cell#

4 FILES SEARCHED...
L5 1 IGG (W) BIND? AND VECTOR AND TRANSDUCE AND CELL#

=> d bib ab

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2000 ACS
AN 1998:684981 CAPLUS
DN 129:271533
TI Viral vectors having chimeric envelope proteins containing the **IgG -binding** domain of protein A
IN Meruelo, Daniel; Ohno, Kouichi
PA New York University, USA
SO PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9844132	A1	19981008	WO 1998-US6237	19980330
AU 9865919	A1	19981022	AU 1998-65919	19980330

PRAI US 1997-829558 19970328
WO 1998-US6237 19980330

W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH, GW, HU, ID, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AB The invention involves viral vectors that can be used to **transduce** a target **cell**, i.e., to introduce genetic material into the **cell**. The targets of interest are eukaryotic **cells** and particularly human **cells**. The transduction can be done in vivo or $i(in vitro). More particularly the invention concerns viral vectors that have chimeric envelope proteins and contain the **IgG-binding** domain of protein A. Vectors were constructed using the gp70 envelope protein of ecotropic murine leukemia virus or the E2 glycoprotein of Sindbis virus. These vectors when used in conjunction with antibodies targeting a particular **cell** are particularly useful for gene therapy.

=> s "protein a" and vector and envelope and particle#

6 FILES SEARCHED...
L6 18 "PROTEIN A" AND VECTOR AND ENVELOPE AND PARTICLE#

=> dup rem l6

PROCESSING COMPLETED FOR L6
L7 8 DUP REM L6 (10 DUPLICATES REMOVED)

=> d 1-8 bib ab

L7 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2000 ACS
AN 1999:614108 CAPLUS
DN 131:224467
TI Retroviral packaging cell line and pseudotyped retroviral **particles**
IN Verma, Inder M.; Kafri, Tal; Bushman, Frederic; Hansen, Mark
PA The Salk Institute for Biological Studies, USA
SO PCT Int. Appl., 53 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9947660	A1	19990923	WO 1999-US5982	19990318

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 1998-44085 19980318
US 1998-148575 19980903

AB The present invention provides packaging cell lines and recombinant lentiviral or retroviral **particles** produced therefrom, particularly pseudotyped retroviral **particles**. The packaging cell lines of the invention are produced by inducibly expressing an

envelope protein by methods described herein. Retroviral particles are produced by inducibly expressing an envelope protein of interest (e.g., a retroviral envelope or the G glycoprotein of vesicular stomatitis virus). Inducible expression of the envelope protein is accomplished by operably linking an envelope protein-encoding nucleotide sequence to an inducible promoter (e.g., a promoter composed of a minimal promoter linked to at least one copy of tetO, the binding site for the tetracycline repressor (tetR) of the Escherichia coli tetracycline resistance operon Tn10). Expression from the inducible promoter is regulated by a transactivating factor, composed of a first ligand-binding domain that neg. regulates transcription from the inducible promoter (e.g., a prokaryotic tetracycline repressor polypeptide (tetR)). Transcription of the envelope-encoding nucleotide sequence under control of the inducible promoter is activated by a transactivator when tetracycline is absent. The packaging cell line is characterized by a first polypeptide having an HIV genome operably linked to a first inducible promoter wherein the HIV genome is defective for cis-acting element, for self-replication, and for expression of functional Env protein; a second polynucleotide encoding a functional heterologous Env protein operably linked to a second inducible promoter; and a third polynucleotide encoding a regulatable transcriptional activator controlling transcription from the first and second inducible promoters. Also described is a screening assay for compds. that affect integration of viral nucleic acid into target (e.g., host) nucleic acid. Such compds. are identified based on their effect on viral integrase.

L7 ANSWER 2 OF 8 MEDLINE DUPLICATE 1
AN 97399691 MEDLINE
DN 97399691
TI Cell-specific targeting of Sindbis virus vectors displaying IgG-binding domains of **protein A**.
AU Ohno K; Sawai K; Iijima Y; Levin B; Meruelo D
CS Department of Pathology, New York University Medical Center, NY 10016, USA.
NC CA68498 (NCI)
CA22247 (NCI)
SO NATURE BIOTECHNOLOGY, (1997 Aug) 15 (8) 763-7.
Journal code: CQ3. ISSN: 1087-0156.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199712
EW 19971203
AB Sindbis virus can infect a broad range of insect and vertebrate cell types due to the widespread distribution of the cellular receptor for the virus. The development of Sindbis virus vectors that target specific cell types could have important implications for the design of gene therapy strategies. To achieve this goal we have designed and constructed Sindbis virus **particles** displaying the IgG-binding domain of **protein A**. The **protein A-envelope** chimeric Sindbis virus **vector** has minimal infectivities against baby hamster kidney and human cell lines. When used in conjunction with monoclonal antibodies that react with cell-surface antigens, however, the **protein A-envelope** chimeric virus was able to infect human cell lines with high efficiency. Infection rates were 90% or higher for human lymphoblastoid cells. A variety of cells could be targeted by changing the monoclonal antibody without generating a new recombinant virus.

L7 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 2
AN 1997:738161 CAPLUS
DN 128:30328
TI Retrovirus vectors displaying the IgG-binding domain of **protein A**
AU Ohno, Kouichi; Meruelo, Daniel
CS Department of Pathology and Kaplan Cancer Center, New York University Medical Center, New York, NY, 10016, USA
SO Biochem. Mol. Med. (1997), 62(1), 123-127
CODEN: BMMEF4; ISSN: 1077-3150
PB Academic Press
DT Journal
LA English
AB We have designed and constructed retrovirus **particles** displaying the IgG-binding domain of **protein A**. We fused the gene for the synthetic antibody-binding portion of **protein A** with the **envelope** gene of ecotropic Moloney murine leukemia virus. The fusion gene was coexpressed in ecotropic retroviral packaging cells, and retrovirus **particles** with IgG-binding activities were recovered. In principle, the **protein A -envelope** chimeric retrovirus complexed with specific monoclonal antibody could be used for cell-targeted gene delivery.

L7 ANSWER 4 OF 8 MEDLINE DUPLICATE 3
AN 97143416 MEDLINE
DN 97143416
TI Characterization of the expression and immunogenicity of poliovirus replicons that encode simian immunodeficiency virus SIVmac239 Gag or **envelope** SU proteins.
AU Anderson M J; Porter D C; Moldoveanu Z; Fletcher T M 3rd; McPherson S; Morrow C D
CS Department of Microbiology, University of Alabama at Birmingham 35294, USA.
NC T32-AI 07150 (NIAID)
AI27767 (NIAID)
AI28147 (NIAID)
+
SO AIDS RESEARCH AND HUMAN RETROVIRUSES, (1997 Jan 1) 13 (1) 53-62.
Journal code: ART. ISSN: 0889-2229.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199705
EW 19970504
AB The effectiveness of the poliovirus vaccines to induce both systemic and mucosal immunity has prompted the development of this virus as a **vector** in which to express foreign proteins. Our laboratory has previously reported on the construction and characterization of poliovirus genomes that encode HIV-1 proteins (Porter DC, et al.: J Virol 1996;70:2643-2649). To develop this system further, we have constructed poliovirus genomes, referred to as replicons, which encode the SIVmac239

Gag or Env SU in place of the poliovirus capsid gene (P1). Since the replicons do not encode capsid proteins, they are encapsidated into poliovirus by passage with a recombinant vaccinia virus, VVP1, which provides the poliovirus capsid proteins in trans. Using this system, we have derived stocks of the encapsidated replicons which encode the SIVmac239 or Env SU protein. Infection of cells with the replicon that encodes SIVmac239 Gag resulted in the expression of a 55-kDa protein that was released from the infected cells. Analysis of the sedimentation of the released proteins by sucrose density gradient centrifugation revealed that the protein was released from the cell in the form of a virus-like **particle**. Infection of cells with the replicons encoding the SIVmac239 Env SU resulted in the expression of a 63-kDa protein, corresponding to the molecular mass predicted for the nonglycosylated SIVmac239 SU **protein**. A second protein with a molecular mass greater than 160 kDa was also immunoprecipitated. After enzymatic deglycosylation, this protein migrated at a molecular mass consistent with that for an Env SU dimer. Analysis of the medium from cells infected with the replicon encoding SIVmac239 Env SU revealed the presence of a protein of molecular mass 85-90 kDa, possibly representing a fragment of the SIVmac239 or Env SU protein. To determine the immunogenicity of the replicons encoding SIVmac239 Gag or Env SU, transgenic mice that express the human receptor for poliovirus, and are thus susceptible to poliovirus, were immunized via the intramuscular route. A serum antibody response to SIV **envelope** was detected following booster immunization, establishing that the encapsidated replicon was immunogenic. Finally, we demonstrate that the replicons have the capacity to infect peripheral blood mononuclear monocytes/macrophages, suggesting that this cell is a possible target for in vivo infection. The results of our studies, then, lend further support for the development and application of recombinant poliovirus replicons in a vaccine strategy.

L7 ANSWER 5 OF 8 MEDLINE DUPLICATE 4
AN 97030199 MEDLINE
DN 97030199
TI Foreign glycoproteins expressed from recombinant vesicular stomatitis viruses are incorporated efficiently into virus **particles**.
AU Schnell M J; Buonocore L; Kretzschmar E; Johnson E; Rose J K
CS Department of Pathology, Yale University School of Medicine, New Haven, CT 06510, USA.
NC R37AI24345 (NIAID)
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1996 Oct 15) 93 (21) 11359-65.
Journal code: PV3. ISSN: 0027-8424.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199702
EW 19970204
AB In a previous study we demonstrated that vesicular stomatitis virus (VSV) can be used as a **vector** to express a soluble protein in mammalian cells. Here we have generated VSV recombinants that express four different membrane proteins: the cellular CD4 **protein, a** CD4-G hybrid protein containing the ectodomain of CD4 and the transmembrane and cytoplasmic tail of the VSV glycoprotein (G), the measles virus hemagglutinin, or the measles virus fusion protein. The proteins were expressed at levels ranging from 23-62% that of VSV G protein and all were transported to the cell surface. In addition we found that all four proteins were incorporated into the membrane **envelope** of VSV along with the VSV G protein. The levels of incorporation of these proteins varied from 6-31% of that observed for VSV G. These results suggest that many different membrane proteins may be co-incorporated quite efficiently with VSV G protein into budding VSV virus **particles** and that specific signals are not required for this co-incorporation process. In fact, the CD4-G protein was incorporated with the same efficiency as wild type CD4. Electron microscopy of virions containing CD4 revealed that the CD4 molecules were dispersed throughout the virion **envelope** among the trimeric viral spike glycoproteins. The recombinant VSV-CD4 virus **particles** were about 18% longer than wild type virions, reflecting the additional length of the helical nucleocapsid containing the extra gene. Recombinant VSVs carrying foreign antigens on the surface of the virus **particle** may be useful for viral targeting, membrane protein purification, and for generation of immune responses.

L7 ANSWER 6 OF 8 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.
AN 96158686 EMBASE
DN 1996158686
TI Poliovirus replicons that express the Gag or the **envelope** surface protein of simian immunodeficiency virus SIV(smm) PBj14.
AU Anderson M.J.; Porter D.C.; Fultz P.N.; Morrow C.D.
CS Department of Microbiology, University of Alabama,Birmingham, AL 35294, United States
SO Virology, (1996) 219/1 (140-149).
ISSN: 0042-6822 CODEN: VIRLAX
CY United States
DT Journal; Article
FS 004 Microbiology
026 Immunology, Serology and Transplantation
037 Drug Literature Index
LA English
SL English
AB Poliovirus genomes encoding the complete gag or env surface gene of the simian immunodeficiency virus SIV(smm) PBj 14 (SIV-PBj14) were constructed. The in vitro-transcribed RNA from these genomes, referred to as replicons, have the capacity for self-replication when transfected into tissue culture cells. Serial passage of the replicons containing the SIV-PBj14 gag or SIV-PBj14 env (SU) genes with a recombinant vaccinia virus, VV-P1, which provides P1 in trans, resulted in the encapsidation of these replicons. Infection of cells with the encapsidated replicons that encode gag, referred to as vIC-SIV-PBj14 Gag, resulted in the production of a 55-kDa protein that was released from the infected cells. Using a

sucrose density-gradient analysis, the protein was found to sediment at a density consistent with that of a virus-like **particle**. Infection of cells with a replicon that encodes the env SU gene, referred to as vIC-SIV-PBj14 SU, resulted in the production of two SIV-PBj14 **envelope**-related intracellular proteins. One of these proteins had a molecular mass consistent with that of the unglycosylated SIV-PBj14 SU protein (63 kDa); the second protein had a higher molecular mass (> 160 kDa). Characterization of this larger protein revealed that it was glycosylated and possibly represented a dimer of the SU **protein**. A pulse-chase analysis of cells infected with vIC-SIV-PBj14 SU demonstrated that a 110- to 130-kDa protein was released, which is consistent with the molecular mass of the SIV-PBj14 SU protein. The results of these studies demonstrate that poliovirus replicons can be used to express foreign proteins, including glycoproteins, which retain many of the physical features of the native protein.

L7 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2000 ACS
AN 1996:113436 CAPLUS
DN 124:167506
TI Eukaryote transduced with retrovirus **vector particle** containing **envelope** protein, ltr, and therapeutic agent and use of **vector** for gene therapy
IN Vanin, Elio F.; Nienhuis, Arthur W.
PA United States Dept. of Health and Human Services, USA
SO PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9534639	A1	19951221	WO 1995-US7385	19950609
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5710037	A	19980120	US 1994-258420	19940610
PRAI US 1994-258420		19940610		

AB A retroviral **vector** which includes a nucleic acid sequence encoding a retroviral **envelope**. The nucleic acid sequence encoding a retroviral **envelope** includes a first nucleic acid sequence encoding a first **envelope** portion which is a portion of MCF viral gp 70 **protein**, a nucleic acid sequence which encodes xenotropic **envelope**, a nucleic acid sequence which encodes an amphotropic **envelope** portion, and a nucleic acid sequence which encodes p15E protein. Such retroviral envelopes encoded by such nucleic acid sequence may be included in infectious viral **particles**. The infectious viral **particles** also may include gene(s) encoding therapeutic agents, and thus may be used in gene therapy.

L7 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2000 ACS
AN 1993:118249 CAPLUS
DN 118:118249
TI Enrichment method for variant proteins with altered binding properties
IN Garrard, Lisa J.; Henner, Dennis J.; Bass, Steven; Greene, Roland; Lowman, Henry B.; Wells, James A.; Matthews, David J.
PA Genentech, Inc., USA
SO PCT Int. Appl., 101 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 5

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9209690	A2	19920611	WO 1991-US9133	19911203
W: CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
CA 2095633	AA	19920604	CA 1991-2095633	19911203
EP 564531	A1	19931013	EP 1992-902109	19911203
EP 564531	B1	19980325		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE				
JP 07503600	T2	19950420	JP 1991-502710	19911203
AT 164395	E	19980415	AT 1992-902109	19911203
ES 2113940	T3	19980516	ES 1992-902109	19911203
US 5750373	A	19980512	US 1993-50058	19930430
US 5688666	A	19971118	US 1994-182530	19940114
US 5780279	A	19980714	US 1995-418928	19950405
US 5846765	A	19981208	US 1995-441871	19950516
US 6040136	A	20000321	US 1997-923854	19970903

PRAI US 1990-621667 19901203
US 1991-683400 19910410
US 1991-715300 19910614
US 1991-743614 19910808
US 1988-264611 19881028
US 1991-682400 19910410
WO 1991-US9133 19911203
US 1992-864452 19920419
US 1993-50058 19930430
US 1993-161692 19931203
US 1995-418928 19950405
US 1995-463587 19950605

AB A method for selecting variants of proteins such as growth hormone and antibody fragment with altered binding properties for their resp. receptor mols. is provided. The method comprises fusing a gene encoding a protein of interest to at least a portion of the gene for a phage coat protein, e.g. for the C-terminal domain of the gene III coat protein of M13 under control of a transcription-regulating element. The **vector** is mutated at .gtoreq.1 position within the 1st gene (e.g. by oligonucleotide-directed mutagenesis), and host cells are transformed with the mutant **vector** and a helper phage having the coat protein gene. Recombinant phagemid **particles** are formed contg. at least part of the mutant expression **vector** and capable of transforming the host; conditions are adjusted so that most phagemid **particles** do not display >1 copy of the fusion protein on the **particle** surface. The phagemid **particles** are screened for binding to the target mol. These steps may be repeated. Phagemids presenting human growth hormone (hGH)-gene III protein fusion proteins prepd. as above were fractionated chromatog. on immobilized hGH-binding **protein**; a single cycle of binding and elution gave >5000-fold enrichment.

=> index biotechnology

INDEX 'ADISALERTS, ADISINSIGHT, AGRICOLA, AIDSLINE, ANABSTR, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA,

CANCERLIT, CAPLUS, CEABA, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU,
DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...'
ENTERED AT 14:49:28 ON 23 MAR 2000

56 FILES IN THE FILE LIST IN STNINDEX

Enter SET DETAIL ON to see search term postings or to view search error messages that display as 0* with SET DETAIL OFF.

=> s "protein a" and vector and envelope and particle#

1 FILE AIDSLINE
1 FILE BIOBUSINESS
7 FILES SEARCHED...
4 FILE BIOSIS
11 FILE BIOTECHABS
11 FILE BIOTECHDS
5 FILE BIOTECHNO
12 FILES SEARCHED...
1 FILE CANCERLIT
6 FILE CAPLUS
2 FILE CEABA
17 FILES SEARCHED...
10 FILE DGENE
24 FILES SEARCHED...
5 FILE EMBASE
3 FILE ESBIOBASE
32 FILES SEARCHED...
37 FILES SEARCHED...
26 FILE IFIPAT
2 FILE LIFESCI
3 FILE MEDLINE
45 FILES SEARCHED...
3 FILE SCISEARCH
5 FILE TOXLIT
53 FILES SEARCHED...
723 FILE USPATFULL
56 FILE WPIDS
55 FILES SEARCHED...
56 FILE WPINDEX

20 FILES HAVE ONE OR MORE ANSWERS, 56 FILES SEARCHED IN STNINDEX

L8 QUE "PROTEIN A" AND VECTOR AND ENVELOPE AND PARTICLE#

=> file biotechabs biotechds biotechno esbiobase lifesci toxlit
=> s l8

2 FILES SEARCHED...
3 FILES SEARCHED...
L9 26 L8

=> dup rem l9

PROCESSING COMPLETED FOR L9
L10 16 DUP REM L9 (10 DUPLICATES REMOVED)

=> d 1-16 bib ab

L10 ANSWER 1 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 2000-02998 BIOTECHDS
TI Producing retro virus **particles** from recombinant, defective adeno viruses, useful for gene therapy or vaccination; recombinant virus **vector** production from mutant adeno virus **vector** for e.g. cancer and autoimmune disease gene therapy in recombinant vaccine and animal model construction
AU Torrent C; Yeh P; Perricaudet M; Klatzmann D; Salzmann J L
PA Rhone-Poulenc-Rorer; Genopoietic
LO Antony, France; Paris, France.
PI WO 9960144 25 Nov 1999
AI WO 1999-FR1184 18 May 1999
PRAI FR 1998-6258 18 May 1998
DT Patent
LA French
OS WPI: 2000-072443 [06]
AB A composition (A) which consists of all the genetic elements needed to construct a retro virus **particle**, incorporated into one or more recombinant adeno viruses that are defective for at least part or all of the E1 and E4 regions, is new. Also claimed are: a recombinant adeno virus (AdV1) defective for at least part or all of the E1 and E4 regions, containing one or more nucleic acids encoding retro virus gag and pol proteins; a recombinant defective adeno virus (AdV2) containing a nucleic acid encoding an **envelope protein**, **a** nucleic acid containing a retro virus packaging sequence, between 2 partial or complete long terminal repeats (LTR) and a sequence of interest; cells modified using (A), which may be used to produce an agent for nucleic acid transfer in vivo; and the in vitro production of retro virus **particles** via incubation of the cells in the presence of (A). (A) may be useful for the in vitro and ex vivo production of retro virus **particles**, which are inturn useful for gene transfer, for e.g. creating animal models of disease, in recombinant vaccines and in gene therapy of e.g. autoimmune diseases and cancer. (72pp)

L10 ANSWER 2 OF 16 TOXLIT
AN 1999:72458 TOXLIT
DN CA-131-224467U
TI Retroviral packaging cell line and pseudotyped retroviral **particles**.
AU Verma IM; Kafri T; Bushman F; Hansen M
SO (1999). PCT Int. Appl. PATENT NO. 9947660 09/23/1999 (The Salk Institute for Biological Studies).
CODEN: PIXXD2.
CY UNITED STATES
DT Patent
FS CA
LA English
OS CA 131:224467
EM 199910
AB The present invention provides packaging cell lines and recombinant lentiviral or retroviral **particles** produced therefrom, particularly pseudotyped retroviral **particles**. The packaging cell lines of the invention are produced by inducibly expressing an **envelope** protein by methods described herein. Retroviral **particles** are produced by inducibly expressing an **envelope** protein of interest (e.g., a retroviral **envelope** or the G glycoprotein of vesicular stomatitis virus). Inducible expression of the **envelope** protein is accomplished by operably linking an **envelope** protein-encoding nucleotide sequence to an inducible promoter (e.g., a promoter composed of a minimal promoter linked to at least one copy of tetO, the binding site for the tetracycline repressor (tetR) of the Escherichia coli tetracycline resistance operon Tn10). Expression from the inducible promoter is regulated by a transactivating factor, composed of a first ligand-binding domain that neg. regulates

transcription from the inducible promoter (e.g., a prokaryotic tetracycline repressor polypeptide (tetR)). Transcription of the **envelope**-encoding nucleotide sequence under control of the inducible promoter is activated by a transactivator when tetracycline is absent. The packaging cell line is characterized by a first polypeptide having an HIV genome operably linked to a first inducible promoter wherein the HIV genome is defective for cis-acting element, for self-replication, and for expression of functional Env **protein**; **a** second polynucleotide encoding a functional heterologous Env protein operably linked to a second inducible promoter; and a third polynucleotide encoding a regulatable transcriptional activator controlling transcription from the first and second inducible promoters. Also described is a screening assay for compds. that affect integration of viral nucleic acid into target (e.g., host) nucleic acid. Such compds. are identified based on their effect on viral integrase.

L10 ANSWER 3 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1999-01649 BIOTECHDS
TI Virus-like **particles** useful as gene-, antigen- or epitope-delivery vehicles;
derived from corona virus with biologically active proteins associated with the virus-like **particle** other than natural ectodomain, used for gene delivery, drug delivery, etc
AU Rottier P J
PA Univ.Utrecht
LO Utrecht, The Netherlands.
PI WO 9849195 5 Nov 1998
AI WO 1998-N
L237 29 Apr 1998
PRAI EP 1997-201292 29 Apr 1997
DT Patent
LA English
OS WPI: 1999-024045 [02]
AB Corona virus virus-like **particles** are claimed possessing a biologically active targetting protein associated on its surface other than the natural corona virus spike protein, endo or ectodomain. The virus-like **particles** are derived from genetically modified or protein modified corona viruses. They are useful as gene-, antigen- or epitope-delivery vehicles (claimed), used in therapy, as immunogens or vaccines and for diagnostics. They provide for the targeted delivery of therapeutic agents to the body. Preferably, the **particle** is attenuated and provided with a corona virus genome in which a gene sequence has been deleted. The targetting means may be a viral **envelope** protein, at least part of a spike **protein**, a CD4 molecule, hormone, enzyme, toxin, etc., but especially is a single-chain antibody fragment. In an example, a recombinant mouse hepatitis virus strain A59 with chimeric spikes was generated using the targetting of mouse corona virus to cat whole fetus (FCWF-D) cells. The effect of the recombination was evident from the formation of large syncytia by the cat cells. (38pp)

L10 ANSWER 4 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1999-00130 BIOTECHDS
TI New viral vectors for transducing target cells;
virus **vector** used to transduce specific target cell type
AU Meruelo D; Ohno K
PA Univ.New-York
LO New York, NY, USA.
PI WO 9844132 8 Oct 1998
AI WO 1998-US6237 30 Mar 1998
PRAI US 1997-829558 28 Mar 1997
DT Patent
LA English
OS WPI: 1998-557124 [47]
AB A virus **vector** used to transduce a target cell is claimed. The **vector** contains a gene encoding a chimeric **envelope** protein (CEP) that contains a portion of an IgG-binding domain of **protein-A**. The CEP is viral in origin, directs the assembly of the fragment into a virus **particle**, and is preferably derived from a retro virus. Alternatively the CEP is an alpha virus **envelope** protein, that directs the virus **particle** assembly, and directs the virus **particle** to a specific cellular receptor. Preferably the CEP contains a cytokine, or cytokine fragment, particularly a transforming growth factor. Also claimed is a virus complex which contains a gene of interest under the control of a viral sequence, and a CEP containing a portion of an IgG-binding domain of **protein-A**. The IgG-binding domain is expressed on the surface of the **envelope** protein, and the complex preferably also includes an antibody specific for a particular cell. Alternatively the virus complex may contain a chimeric alpha virus **envelope** protein, particularly of Sindbis virus origin. The claims extend to a means of expressing a gene of interest in a target cell by contacting the cell with the virus complex. (53pp)

L10 ANSWER 5 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1998-05286 BIOTECHDS
TI New packaging cell lines for pseudotyped retro viral vectors;
packaging cell culture for retro virus **vector**
AU Miyanohara A; Yee J K; Chen S T; Prussak C E; Friedmann T
PA Univ.California; City-of-Hope
LO Oakland, CA, USA; Duarte, CA, USA.
PI WO 9805759 12 Feb 1998
AI WO 1997-US13846 6 Aug 1997
PRAI US 1996-694652 7 Aug 1996
DT Patent
LA English
OS WPI: 1998-145602 [13]
AB A eukaryotic cell for packaging a pseudotyped retro virus **vector** is claimed. It comprises: a stably chromosomally-integrated 1st nucleotide sequence (NS1) encoding a retro virus Gag **protein**; **a** stably chromosomally-integrated 2nd nucleotide sequence (NS2) encoding a retro virus Pol protein; and a 3rd nucleotide sequence encoding an **envelope** protein operably linked to an inducible promoter, from where transcription from the promoter is regulated by a multichimeric transactivator (MTA), whereupon introduction of a retro virus RNA genome into the packaging cell and induction of expression from the inducible promoter, the packaging cell produces infectious retro virus **particles** at a titer of at least 10,000 cfu/ml within 4 days. The MTA comprises a 1st ligand-binding domain (LBD), where binding of a ligand to this domain inhibits transcriptional activation by the MTA, a eukaryotic transcriptional activation domain, and a 2nd LBD. Also claimed are: a pseudotyped retro virus **particle** produced in the packaging cell culture; the packaging cell culture derived from Cf2Th cell; NS1 and NS2 encoding Gag and Pol; and a method for producing a recombinant retro virus **vector particle**. (84pp)

L10 ANSWER 6 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1999-02847 BIOTECHDS
TI DNA constructs for inhibiting infectious virus production; HIV virus-like **particle** containing ribozyme, CD4 ectodomain and vesicular-stomatitis virus G-protein or HIV virus **envelope** protein gene, used for infection or AIDS gene therapy
AU Schubert M; Harmison II G G; Chen C J; Banjerjea A
PA U.S.Dep.Health-Hum.Serv.
LO Washington, DC, USA.
PI US 5847096 8 Dec 1998
AI US 1995-418848 7 Apr 1995
PRAI US 1995-418848 7 Apr 1995
DT Patent
LA English
OS WPI: 1999-059150 [05]
AB A DNA construct that encodes a chimeric protein is new and contains a chimeric gene linked to at least one HIV virus LTR-promoter sequence, where the chimeric gene contains a 1st sequence encoding the ectodomain portion of the CD4-protein and a 2nd sequence encoding the transmembrane and cytoplasmic portions of an **envelope** protein (e.g. a vesicular-stomatitis virus G-protein or an HIV virus **envelope** protein). Also included in the construct are multi-target ribozymes. Also claimed are: a DNA construct that encodes a complete CD4-**protein**; a DNA construct selected from DIRz27, MONORz37, MONORz6, NONARz63-6, PENTARz51 and PENTARz63; and DNA constructs HDPACK1 (7,399 bp) and HD1(T7) (2,940 bp). DNA constructs HD2, HD3, HD4, HD5 and HD6 can also be used. A composition containing the DNA construct can be used to treat a patient infected with a HIV virus. Also disclosed are: the potential therapeutic use of the HIV **particles** against AIDS; a viral **particle** which interferes with the replication of a retro virus present in a host cell; and a host cell (e.g. H9, CEM or HeLa). (106pp)

L10 ANSWER 7 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1998-10812 BIOTECHDS
TI DNA construct for expressing modified foamy virus **envelope** protein; for producing FV-pseudotyped retro virus vectors
AU Rethwilm A; Lindemann D
PA Transgene
LO Cedex, France.
PI EP 864652 16 Sep 1998
AI EP 1997-400573 14 Mar 1997
PRAI EP 1997-400573 14 Mar 1997
DT Patent
LA English
OS WPI: 1998-469236 [41]
AB A DNA construct for the expression of a modified foamy virus (FV) **envelope** protein is claimed. Also claimed are: a protein expressed by the construct; a pseudotyped virus **particle** containing a FV **envelope protein**; a complementation cell line containing the construct; a method for producing the pseudotyped viral **particle** comprising introducing a recombinant retro virus **vector** into the complementation cell line, culturing and recovering the pseudotyped viral **particle** from the culture; and a mammal cell infected with the pseudotyped viral **particle**. FV-pseudotyped retro virus vectors or mammalian cells infected with them can be used for vaccination or gene therapy e.g. of genetic disorders, cancer or virus-induced disease. The broad host range of FVs, their resistance to inactivation by human serum, and their ability to efficiently infect various cell types, should make mouse leukemia virus (preferred) (MuLV)-based retro virus vectors pseudotyped with the HFV-D2MuLV (HFV **envelope** protein with the cytoplasmic domain partly deleted and fused to a MuLV domain) chimeric **envelope protein a** useful tool for efficient gene transfer into various cell types. (18pp)

L10 ANSWER 8 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1998-01001 BIOTECHDS
TI New isolated porcine retro virus; pig recombinant retro virus production and sense and antisense nucleic acid for use in recombinant vaccine, therapy and gene therapy
AU Galbraith D N; Haworth C; Lees G M; Smith K T
PA Q-One-Biotech; Imutran
LO Glasgow, UK; Cambridge, UK.
PI WO 9740167 30 Oct 1997
AI WO 1997-GB1087 18 Apr 1997
PRAI GB 1997-2668 10 Feb 1997; GB 1996-8164 19 Apr 1996
DT Patent
LA English
OS WPI: 1997-535851 [49]
AB A new isolated nucleic acid molecule encoding at least one pig retro virus (PoEV) expression product (DNA sequence and protein sequence specified), preferably a polymerase, the virion core protein (GAG) and/or **envelope** protein (ENV), can be contained on a virus or plasmid **vector** and used to transform a prokaryotic or eukaryotic host cell for production of a recombinant PoEV protein, which may be used as a vaccine. Also claimed is an antibody or fragment capable of binding to the **protein**, a DNA primer, a DNA probe and a pig modified so as not to express an infectious PoEV capable of infecting humans. The DNA primer or probe may be used to detect PoEV in a sample. The nucleic acid, antisense nucleic acid, protein or cells, tissues or organs from the modified pig may be used in therapy or diagnosis. In an example, 500 ml supernatant derived from exponentially growing pig kidney cells (PK-15, ATCC CCL33) was centrifuged to pellet virus **particles**. RNA was prepared from the viral pellet and used to prepare cDNA. The cDNA was digested, cloned into plasmid pZErO, purified and sequenced. (69pp)

L10 ANSWER 9 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1997-10341 BIOTECHDS
TI Cell-specific targeting of Sindbis virus vectors displaying IgG-binding domains of **protein-A**; for use in gene therapy
AU Ohno K; Sawai K; Iijima Y; Levin B; *Meruelo D
CS Univ.New-York
LO Department of Pathology and Kaplan Cancer Center, New York University Medical Center, 550 First Avenue, New York, NY 10016, USA.

Email: merue01@mcrcr.med.nyu.edu
SO Nat.Biotechnol.; (1997) 15, 8, 763-67 ISSN: 1087-0156
DT Journal
LA English
AB Sindbis virus vectors targeting specific cell types were constructed, for
possible use in gene therapy. Sindbis virus **particles** displaying the IgG-binding domain of Staphylococcus aureus **protein-A** were constructed, with minimal infectivity against BHK and human cell lines. Modified Sindbis virus helper vectors plasmid DH-BB-Bst and DH-BB-ZZ were co-transfected with plasmid SinRep/LacZ, and used for expression of an Escherichia coli beta-galactosidase (EC-3.2.1.23) reporter gene. When used with monoclonal antibodies (MAbs) reacting with cell surface antigens, the **protein-A-envelope** chimeric virus was able to infect human cell lines with high efficiency. Infection rates were 90% or higher for human lymphoblastoid Daudi and HL-60 cells. Various cell types could be targeted by changing the MAb without generating a new recombinant virus. (25 ref)

L10 ANSWER 10 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1998-03286 BIOTECHDS
TI Retro virus vectors displaying the IgG-binding domain of **protein -A**;
for use in gene therapy
AU Ohno K; *Meruelo D
CS Univ.New-York
LO Kaplan Cancer Center, New York University Medical Center, 560 First Avenue, New York, NY 10016, USA.
SO Biochem.Mol.Med.; (1997) 62, 1, 123-27
CODEN: BMMEF ISSN: 1077-3150
DT Journal
LA English
AB Retro virus **vector particles** displaying the IgG-binding domain of **protein-A** were constructed. An artificial gene encoding the antibody-binding portion of **protein -A** was fused with an ecotropic mouse Moloney leukemia virus **envelope** gene. Two IgG-binding domains were amplified by polymerase chain reaction using plasmid pEZZ18 as template. Products were digested with BstEII and EcoRI, and were used to replace the virus env gene in a p439 **vector**. Genes were used for transient transfection of COS-7 cells by lipofection. The fusion gene was co-expressed in an ecotropic psi-2 retro virus packaging cell culture, and retro virus **particles** with IgG-binding activities were recovered. The **protein-A-envelope** chimeric retro virus complexed with a specific monoclonal antibody could be useful in cell-targeted gene delivery, e.g. for gene therapy. (13 ref)

L10 ANSWER 11 OF 16 BIOTECHNO COPYRIGHT 2000 Elsevier Science B.V.DUPLICATE
AN 1997:27002969 BIOTECHNO
TI Characterization of the expression and immunogenicity of poliovirus replicons that encode Simian immunodeficiency virus SIV(mac)239 gag or **envelope** SU proteins
AU Anderson M.J.; Porter D.C.; Moldoveanu Z.; Fletcher III T.M.; McPherson S.; Morrow C.D.
CS C.D. Morrow, Department of Microbiology, 619 Lyons-Harrison Research Bldg., University of Alabama, 1900 Seventh Avenue South, Birmingham, AL 35294-0007, United States.
SO AIDS Research and Human Retroviruses, (1997), 13/1 (53-62), 36 reference(s)
CODEN: ARHRE7 ISSN: 0889-2229
DT Journal; Article
CY United States
LA English
SL English
AB The effectiveness of the poliovirus vaccines to induce both systemic and mucosal immunity has prompted the development of this virus as a **vector** in which to express foreign proteins. Our laboratory has previously reported on the construction and characterization of poliovirus genomes that encode HIV- 1 proteins (Porter DC, eta.: J Virol 1996;70:2643-2649). To develop this system further, we have constructed poliovirus genomes, referred to as replicons, which encode the SIV(mac)239 Gag or Env SU in place of the poliovirus capsid gene (P1).
Since the replicons do not encode capsid proteins, they are encapsidated into poliovirions by passage with a recombinant vaccinia virus, VVP1, which provides the poliovirus capsid proteins in trans. Using this system, we have derived stocks of the encapsidated replicons which encode the SIV(mac)239 Gag or Env SU protein. Infection of cells with the replicon that encodes SIV(mac)239 Gag resulted in the expression of a 55-kDa protein that was released from the infected cells. Analysis of the sedimentation of the released proteins by sucrose density gradient centrifugation revealed that the protein was released from the cell in the form of a virus-like **particle**. Infection of cells with the replicons encoding the SIV(mac)239 Env SU resulted in the expression of a 63-kDa protein, corresponding to the molecular mass predicted for the nonglycosylated SIV(mac)239 SU **protein**. A second protein with a molecular mass greater than 160 kDa was also immunoprecipitated. After enzymatic deglycosylation, this protein migrated at a molecular mass consistent with that for an Env SU dimer.
Analysis of the medium from cells infected with the replicon encoding SIV(mac)239 Env SU revealed the presence of a protein of molecular mass 85-90 kDa, possibly representing a fragment of the SIV(mac)239 Env SU protein. To determine the immunogenicity of the replicons encoding SIV(mac)239 Gag or Env SU, transgenic mice that express the human receptor for poliovirus, and are thus susceptible to poliovirus, were immunized via the intramuscular route. A serum antibody response to SIV **envelope** was detected following booster immunization, establishing that the encapsidated replicon was immunogenic. Finally, we demonstrate that the replicons have the capacity to infect peripheral blood mononuclear monocytes/macrophages, suggesting that this cell is a possible target for in vivo infection. The results of our studies, then, lend further support for the development and application of recombinant poliovirus replicons in a vaccine strategy.

L10 ANSWER 12 OF 16 BIOTECHNO COPYRIGHT 2000 Elsevier Science B.V.DUPLICATE
AN 1996:26347126 BIOTECHNO
TI Foreign glycoproteins expressed from recombinant vesicular stomatitis
viruses are incorporated efficiently into virus **particles**
AU Schnell M.J.; Buonocore L.; Kretzschmar E.; Johnson E.; Rose J.K.
CS Department of Pathology, Yale University School of Medicine, 310 Cedar
Street,New Haven, CT 06510, United States.
SO Proceedings of the National Academy of Sciences of the United States of
America, (1996), 93/21 (11359-11365)
CODEN: PNASA6 ISSN: 0027-8424
DT Journal; Conference Article
CY United States
LA English
SL English
AB In a previous study we demonstrated that vesicular stomatitis virus (VSV)
can be used as a **vector** to express a soluble protein in
mammalian cells. Here we have generated VSV recombinants that express
four different membrane proteins: the cellular CD4 **protein**,
a CD4-G hybrid protein containing the ectodomain of CD4 and the
transmembrane and cytoplasmic tail of the VSV glycoprotein (G), the
measles virus hemagglutinin, or the measles virus fusion protein. The
proteins were expressed at levels ranging from 23- 62% that of VSV G
protein and all were transported to the cell surface. In addition we
found that all four proteins were incorporated into the membrane
envelope of VSV along with the VSV G protein. The levels of
incorporation of these proteins varied from 6-31% of that observed for
VSV G. These results suggest that many different membrane proteins may be
co-incorporated quite efficiently with VSV G protein into budding VSV
virus **particles** and that specific signals are not required for
this co-incorporation process. In fact, the CD4-G protein was
incorporated with the same efficiency as wild type CD4. Electron
microscopy of virions containing CD4 revealed that the CD4 molecules were
dispersed throughout the virion **envelope** among the trimeric
viral spike glycoproteins. The recombinant VSV-CD4 virus
particles were about 18% longer than wild type virions,
reflecting the additional length of the helical nucleocapsid containing
the extra gene. Recombinant VSVs carrying foreign antigens on the surface
of the virus **particle** may be useful for viral targeting,
membrane protein purification, and for generation of immune responses.

L10 ANSWER 13 OF 16 BIOTECHNO COPYRIGHT 2000 Elsevier Science B.V.
AN 1996:26180391 BIOTECHNO
TI Poliovirus replicons that express the Gag or the **envelope**
surface protein of simian immunodeficiency virus SIV(smm) PBj14
AU Anderson M.J.; Porter D.C.; Fultz P.N.; Morrow C.D.
CS Department of Microbiology, University of Alabama,Birmingham, AL 35294,
United States.
SO Virology, (1996), 219/1 (140-149)
CODEN: VIRLAX ISSN: 0042-6822
DT Journal; Article
CY United States
LA English
SL English
AB Poliovirus genomes encoding the complete gag or env surface gene of the
simian immunodeficiency virus SIV(smm) PBj 14 (SIV-PBj14) were
constructed. The in vitro-transcribed RNA from these genomes, referred to
as replicons, have the capacity for self-replication when transfected
into tissue culture cells. Serial passage of the replicons containing the
SIV-PBj14 gag or SIV-PBj14 env (SU) genes with a recombinant vaccinia
virus, VV-P1, which provides P1 in trans, resulted in the encapsidation
of these replicons. Infection of cells with the encapsidated replicons
that encode gag, referred to as vIC-SIV-PBj14 Gag, resulted in the
production of a 55-kDa protein that was released from the infected cells.
Using a sucrose density-gradient analysis, the protein was found to
sediment at a density consistent with that of a virus-like
particle. Infection of cells with a replicon that encodes the env
SU gene, referred to as vIC-SIV-PBj14 SU, resulted in the production of
two SIV-PBj14 **envelope**-related intracellular proteins. One of
these proteins had a molecular mass consistent with that of the
unglycosylated SIV-PBj14 SU protein (63 kDa); the second protein had a
higher molecular mass (> 160 kDa). Characterization of this larger
protein revealed that it was glycosylated and possibly represented a
dimer of the SU **protein**. A pulse-chase analysis of
cells infected with vIC-SIV-PBj14 SU demonstrated that a 110- to 130-kDa
protein was released, which is consistent with the molecular mass of the
SIV-PBj14 SU protein. The results of these studies demonstrate that
poliovirus replicons can be used to express foreign proteins, including
glycoproteins, which retain many of the physical features of the native
protein.

L10 ANSWER 14 OF 16 TOXLIT
AN 1996:63025 TOXLIT
DN CA-124-167506K
TI Eukaryote transduced with retrovirus **vector particle**
containing **envelope** protein, ltr, and therapeutic agent and use
of **vector** for gene therapy.
AU Vanin EF; Nienhuis AW
SO (1995). PCT Int. Appl. PATENT NO. 95 34639 12/21/95 (United States Dept.
of Health and Human Services).
CY United States
DT Patent
FS CA
LA English
OS CA 124:167506
EM 199605
AB A retroviral **vector** which includes a nucleic acid sequence
encoding a retroviral **envelope**. The nucleic acid sequence
encoding a retroviral **envelope** includes a first nucleic acid
sequence encoding a first **envelope** portion which is a portion of
MCF viral gp 70 **protein**, a nucleic acid sequence which
encodes xenotropic **envelope**, a nucleic acid sequence which
encodes an amphotropic **envelope** portion, and a nucleic acid
sequence which encodes p15E protein. Such retroviral envelopes encoded by
such nucleic acid sequence may be included in infectious viral
particles. The infectious viral **particles** also may
include gene(s) encoding therapeutic agents, and thus may be used in gene
therapy.

L10 ANSWER 15 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1994-14185 BIOTECHDS
TI Use of HIV virus protein-R and nucleic acid;
use of vpr fusion protein in therapy or DNA in gene therapy; retro virus multiplication enhancement in cell culture
PA Weiner D B
PI WO 9419456 1 Sep 1994
AI WO 1994-US2191 22 Feb 1994
PRAI US 1993-167608 15 Dec 1993; US 1993-19601 19 Feb 1993
DT Patent
LA English
OS WPI: 1994-294323 [36]
AB A new method for inducing differentiation involves contacting undifferentiated cells with HIV virus vpr protein (virus protein-R) or a fragment, or introducing vpr DNA. Compounds which inhibit vpr from stimulating differentiation, or from binding to p55, p24, p15, p7 or p6 protein, may be identified by contacting undifferentiated cells or target protein with vpr protein in the presence and absence of the test compound. Compounds which inhibit p24 protein binding to p15 or p7 protein, or inhibit p24 aggregation, may be identified by determining binding or aggregation in the presence of a test compound. Retro virus multiplication in a cell culture may be enhanced by adding vpr protein in conjunction with retro virus infection. A new drug delivery **particle** comprises vpr, p24 and a non-HIV cell-type specific **envelope protein**. **A** new fusion protein comprises a biologically active portion linked to a p24-binding vpr fragment, and is encoded by DNA on an expression **vector**. The vpr or DNA may be used in therapy or gene therapy of e.g. cancer, psoriasis, autoimmune disease, granuloma, Parkinson disease, etc. (114pp)

L10 ANSWER 16 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1991-02003 BIOTECHDS
TI Invasive microorganisms;
comprising non-invasive Escherichia coli transformed with Yersinia pseudotuberculosis, Yersinia enterocolitica or Salmonella ail or inv gene; potential application as live vaccine
PA Leland-Stanford-Jr.Univ.
PI WO 9012867 1 Nov 1990
AI WO 1990-US2131 18 Apr 1990
PRAI US 1989-340375 19 Apr 1989
DT Patent
LA English
OS WPI: 1990-348470 [46]
AB An invasive microorganism (I) is claimed which comprises a microbial host lacking natural invasive capacity and a DNA construct containing an ail or inv gene, encoding a single membrane protein imparting an invasive phenotype to the host, and an extra **envelope**, capsid or surface membrane gene joined to a **vector**. The host is Escherichia coli and the ail gene is homologous to ail from Yersinia enterocolitica or Yersinia pseudotuberculosis or derived from Salmonella sp.. Also claimed are: a recombinant vaccine comprising (I) and a carrier; DNA probe encoding the ail gene comprising less than 50 kb of naturally occurring chromosomal flanking sequences; DNA comprising transcriptional and translational initiation and termination regulatory regions and the ail gene; a method for determining virulence of a Yersinia strain; a **particle** non-diffusibly coated with ail **protein**; a method for binding cells to a surface; and a method for preparing a bacterial vaccine having invasive capability. (I) can be used to introduce exogenous molecules into mammalian cells using unicellular microorganisms as a vehicle. (69pp)

=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	SESSION	TOTAL
FULL ESTIMATED COST		27.35	93.92

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	SESSION	TOTAL
CA SUBSCRIBER PRICE		0.00	-3.90

STN INTERNATIONAL LOGOFF AT 14:56:55 ON 23 MAR 2000

(FILE 'HOME' ENTERED AT 14:39:52 ON 23 MAR 2000)

FILE 'MEDLINE, AIDSLINE, CAPLUS, EMBASE, SCISEARCH, JICST-EPLUS, JAPIO'
ENTERED AT 14:40:06 ON 23 MAR 2000

L1 1049 S PROTEIN (W) "A" AND IGG(W)BIND?
L2 0 S L1 AND VIRAL (W) VECTOR
L3 1049 S PROTEIN (W) "A" AND IGG (W) BIND?
L4 6 S L3 AND VIRAL AND VECTOR
L5 1 S IGG (W) BIND? AND VECTOR AND TRANSDUCE AND CELL#
L6 18 S "PROTEIN A" AND VECTOR AND ENVELOPE AND PARTICLE#
L7 8 DUP REM L6 (10 DUPLICATES REMOVED)

INDEX 'ADISALERTS, ADISINSIGHT, AGRICOLA, AIDSLINE, ANABSTR, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA,
CANCERLIT, CAPLUS, CEABA, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 14:49:28 ON 23 MAR 2000

SEA "PROTEIN A" AND VECTOR AND ENVELOPE AND PARTICLE#

1	FILE AIDSLINE
1	FILE BIOBUSINESS
4	FILE BIOSIS
11	FILE BIOTECHABS
11	FILE BIOTECHDS
5	FILE BIOTECHNO
1	FILE CANCERLIT
6	FILE CAPLUS
2	FILE CEABA
10	FILE DGENE
5	FILE EMBASE
3	FILE ESBIOBASE
26	FILE IFIPAT
2	FILE LIFESCI
3	FILE MEDLINE
3	FILE SCISEARCH
5	FILE TOXLIT
723	FILE USPATFULL
56	FILE WPIDS
56	FILE WPINDEX

L8 QUE "PROTEIN A" AND VECTOR AND ENVELOPE AND PARTICLE#

FILE 'BIOTECHDS, BIOTECHNO, ESBIOBASE, LIFESCI, TOXLIT' ENTERED AT 14:54:07 ON 23 MAR 2000

L9 26 S L8
L10 16 DUP REM L9 (10 DUPLICATES REMOVED)